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## **Data Management and Dissemination for Censuses and Surveys at National Institute of Statistics**

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### **Abstract**

The National Institute of Statistics (NIS), within the Ministry of Planning, is the focal point on statistical matters in Cambodia. The NIS compiles and consolidates statistics provided by decentralized offices and also collects primary data through household and establishment surveys and population, agricultural and economic censuses. After the general election of 1993, the National Institute of Statistics (NIS), Ministry of Planning has conducted many surveys and censuses based on support from development partners and allocated budgets from the Royal Government of Cambodia.

This paper will describe the current situation of data management and dissemination for censuses and surveys and challenges related to data management managed by National Institute of Statistics, Ministry of Planning.

### **I. Introduction**

1. The National Institute of Statistics (NIS), within the Ministry of Planning, is the focal point on statistical matters in Cambodia. The NIS compiles and consolidates statistics provided by decentralized offices and also collects primary data through household and establishment surveys and population, agricultural and economic censuses.

2. Cambodia has a decentralized statistical structure. There are statistical bureaus and sections within Planning and Statistics departments of various Ministries and in planning and statistical units in the provinces and districts.

3. The national statistical system covers all designated official statistics and statistical units within ministries and government institutions. In addition to the NIS, each ministry and other government institutions have statistics units responsible for producing statistics. Various ministries and other institutions collect and produce statistics as part of their work. The system consists of NIS and 27 line ministries, government institutions, and the National Bank of Cambodia, all producers of designated official statistics.

4. After the general election of 1993, the National Institute of Statistics (NIS), Ministry of Planning has conducted many surveys and censuses based on support from development partners and allocated budgets from the Royal Government of Cambodia. According to the Statistics Law, the National Institute of Statistics (NIS), Ministry of Planning has conducted the General Population Census in 1998 and 2008, the Economic Census in 2011, the Agriculture Census in 2013, and main surveys such as the Socio-Economic Survey, Cambodia Demographic and Health Survey, Cambodia Inter-censal Population Survey, and other surveys. All censuses and surveys have received support from development partners and contributed fund from Royal Government of Cambodia.

5. The United Nations Population Fund (UNFPA) provided primary support for the 1996 Demographic Survey, the 1998 Population Census, the 2000 Cambodia Demographic and Health Survey (CDHS), the 2004 Cambodia Inter-censal Population Survey (CIPS), and the 2008 Population Census, with additional funding from JICA, the Government of Japan, and the German Government. The UNFPA, sharing with JICA, supported the 2008 Population Census in-depth analyses and the dissemination of a population database and in-depth analysis reports.

6. Major donors such as USAID, UNFPA, UNICEF, DFID/ADB and CDC/GAP financed rounds of the Cambodia Demographic and Health Survey (CDHS) in 2000 and 2005. The CDHS 2010 is being supported by UNFPA, USAID, UNICEF and JICA. CDHS is implemented with cooperation between NIS/MOP and MoH. The Sida project started in 2006 and lasted 3 years for the first phase. It focused on a continuous household survey, IT strengthening, and subject matter analyses. The results will be used greatly for the national accounts and monitoring the NSDP. Sida project phase 2 (2009-2011) supported an annual Socio-Economic Survey and the CSES 2009, a large scale survey round every five years that was successfully conducted and was released on World Statistics Day in 2010. The Sida project also supports the areas of coordination, human resource development, developing statistical standards and methodologies, writing statistical subject matter reports, strengthening capacity in specific areas such as CPI and household income and expenditure and national accounts, NIS website, database development, and using SuperCross as a tool for data analysis of CSES.

## **II. Objective**

7. The main objective of this paper is to explore the Data Management situation for censuses and surveys managed by the National Institute of Statistics (NIS), Ministry of Planning (MoP).

## **III. Current Situation**

### **A. Role and responsibilities**

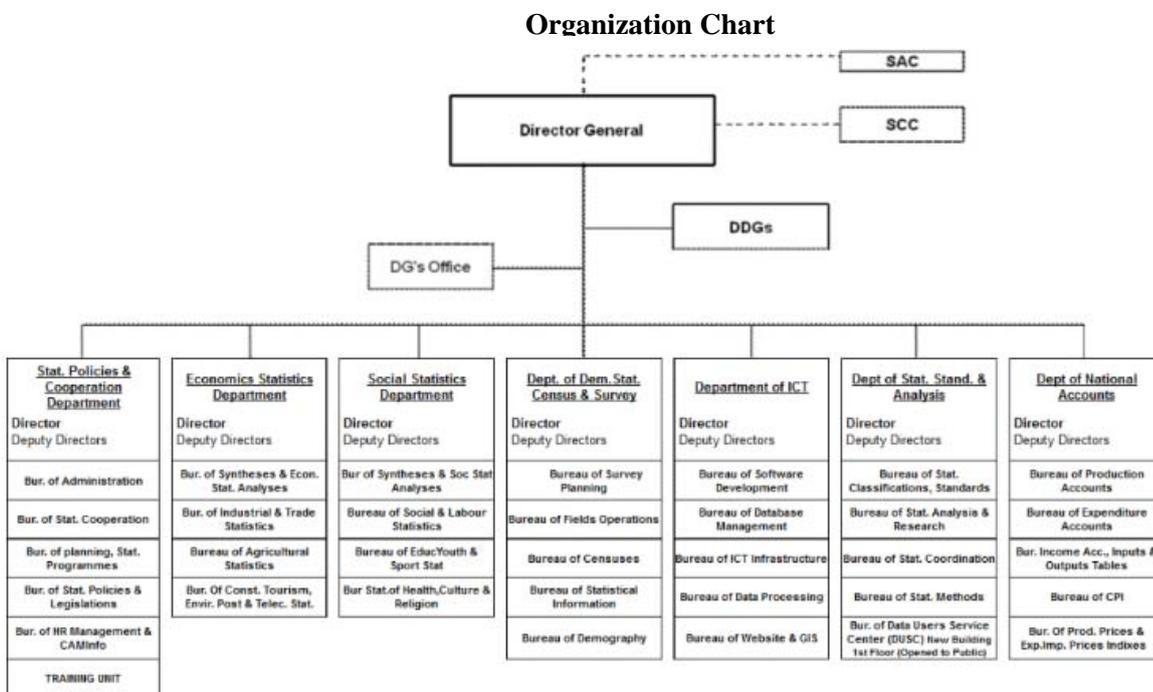
8. The National Statistical System in Cambodia is highly decentralized. The central institution in the National Statistical System is the NIS, located in the Ministry of Planning. According to the Statistics Law, the NIS is the official national statistical institution of the Royal Government of Cambodia, with the responsibility for establishing, leading and coordinating an integrated national statistical system that covers all designated official statistics and statistical units within ministries and government institutions.

9. The Statistics Law governs all matters relating to collection, processing, compilation, analysis, publication, and dissemination of statistical data and pertains to the whole Kingdom of Cambodia. Under the Law there are two Sub Decrees that define the work for the National Statistical System, a Sub Decree on

Organization and Functioning of the National Statistical System, and a Sub Decree on Designated Official Statistics.

10. According to the Sub Decree on the Organization and Functioning of the National Statistical System, the Statistics Advisory Council and the Statistics Coordination Committee were established in January 2007 to assist NIS in technical coordination of the official statistics.

11. The Sub Decree on Designated Official Statistics defines which surveys the statistical units shall be responsible for and what obligations the NIS and the statistical units have, e.g. that all data collection must be registered within the NIS and all information and statistical data produced must be submitted to NIS. An annual reporting for the National Statistical System is to be carried out by NIS to the Council of Ministers. The first annual reporting was made for 2010 in August 2011. The National Institute of Statistics (NIS) under control by Ministry of Planning and the organization chart of National Institute of Statistics (NIS), Ministry of Planning (MoP) as mentioned below:



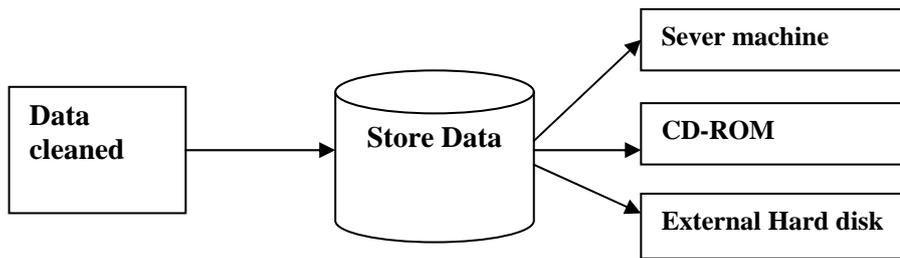
Note: - Statistical Advisory Council (SAC)  
- Statistics Coordination Committee (SCC)

## B. Data Management

### *Data Storage*

12. Data from censuses and surveys have been stored in different places and devices, such as internal and external hard disks, CD-ROMs, and server machines. The raw data from the censuses and surveys cannot be provided to users according to statistical law related to confidential information, but users can make special requests to National Institute of Statistics (NIS) to get permission from NIS to use a sample of raw data for research.

**Figure 1: Diagram of data storage**

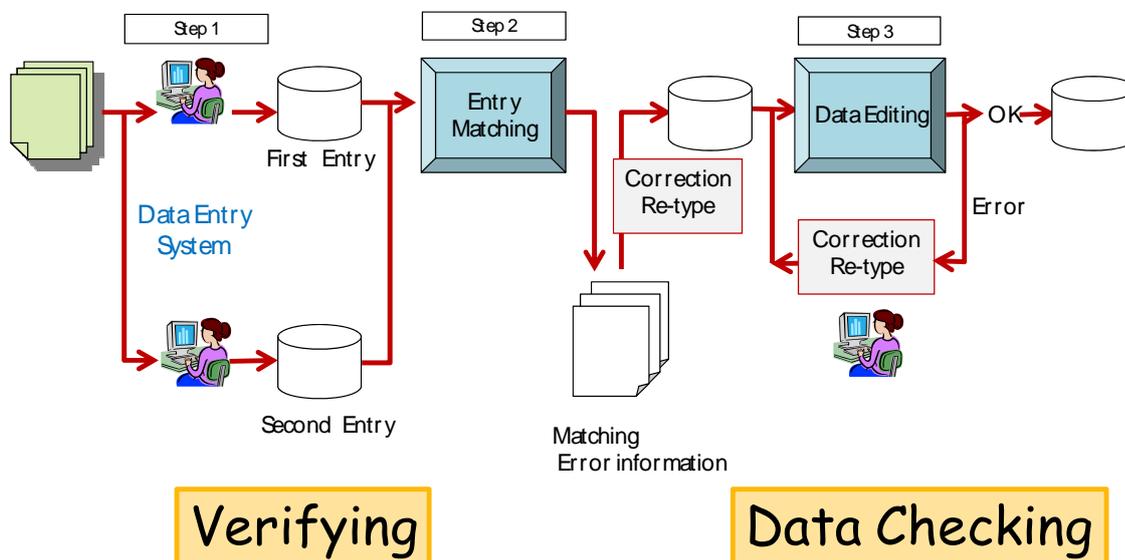


**Data Processing**

13. Data is still captured using micro computers, instead of OCR or scanner technology, for the Population Census, Economic Census, Agriculture Census and surveys due to the experience of staff and following from the starting point of the Socio-economic Survey 1993/94 and Population Census in 1998. However, in the future, the OCR or scanner may be used for censuses to reduce time of data processing and releasing the result in a more timely manner.

14. The data processing activity has implemented based on project activities after receiving questionnaire from the field and coding/editing stage. Staff working in the Information Technology and Communication Department is mostly involved in this activity. Different software is used to process different censuses and surveys. For example, the General Population Census of Cambodia used CSPro, Socio-Economic Survey used Visual Basic and SQL Server, and the Economic Census used Microsoft Access. The flow of data processing activities for censuses and survey as detailed below.

**Figure 2: System Flowchart**



**Verifying**

**Data Checking**

**Data Dissemination**

15. The results from censuses and surveys have been disseminated in three types of censuses and surveys products. The first is disseminated by providing printed reports, second is conducting seminars or workshops at the national and sub-national level, and third is disseminating electronic products (offline and online). The raw

data from census and surveys is not allowed to be used without permission from the Director General of NIS and Senior Minister, Minister of Planning for research purpose based on statistical law.

*i). Report printing:* Many hard copy products of results, such as tables, thematic maps, final reports, and in-depth analytical reports have been provided directly to government institution at national and sub-national without conducting seminars or workshops. The Data Users Service Center located in the first floor inside the National Institute of Statistics (NIS), Ministry of Planning (MoP), is the unit that serves many data users.

*ii). Seminar or workshop:* The results from censuses or surveys are presented to show how to use the data. Users can ask questions about using the data during the workshop. The workshop or seminar is always conducted at national and sub-national levels.

*iii). Electronic products:* Both offline and online products are disseminated. The offline product contains censuses and survey data and software for using these data after installing the program. For online dissemination, some key indicators from censuses and surveys have been hosted on the NIS website ([www.nis.gov.kh](http://www.nis.gov.kh)).

#### **IV. Challenges**

16. Currently, data management has been organized smoothly and safety in the differences places and devices. However, there are some challenges for maintaining data management in the future. The main challenges as described below:

- Census and survey data are bigger and bigger from time to time for data storage. Most of the equipment and material provided by donors and funding supported by government has been limited. In the near future, some projects will finished by 2015 and the government will support some activities which will not be supported by any donor.
- Difficult to keep staff because many move to work outside the institution due to low salary and the fact that incentives provided by donors have been cut.
- Data management control by different staff based on project activities.
- The software using for census and survey based on project from previous survey and current survey according to new update.
- The capacity of staff who have limited IT skills and some staff who are working in IT but have no skills in IT.

#### **V. Conclusion**

17. The National Institute of Statistics (NIS), Ministry of Planning (MoP) has conducted the main census and survey based on statistical law. The main censuses are the General Population Census of Cambodia 1998 and 2008, Economic Census 2011, and Agriculture Census. The main surveys are Demographic Survey 1996, Cambodia Inter-censal Population Survey 2004 and 2013, Cambodia Demographic and Health Survey 2000, 2005 and 2010, and Cambodia Inter-censal Economic Survey 2014. However, NIS faces some problems such as the low skill of staff in IT, low salary for keeping staff to work longer, and donors reducing support for projects, which required additional government support, though funds from the government are limited.